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| 10/566,714 | 02/01/2006 | Kuniaki Ishibashi | 053565 | 8972 |

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

| EXAMINER | |
|---|---|
| HON, SOW FUN | |

| ART UNIT | PAPER NUMBER |
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| 1794 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| *Office Action Summary* | **Application No.** 10/566,714 | **Applicant(s)** ISHIBASHI ET AL. | |
|---|---|---|---|
| | **Examiner** SOPHIE HON | **Art Unit** 1794 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *4/28/09*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *8-15 and 17-19* is/are pending in the application.

4a) Of the above claim(s) *18-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-15, 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/06/09 has been entered.

### *Response to Amendment*

### *Withdrawn Rejections*

2. The 35 U.S.C. 103(a) rejections of claims 1, 4-17 in the Office action dated 1/06/09 are withdrawn due to Applicant's amendment dated 4/06/09.

### *New Rejections*

### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 8-10, 12, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto (JPO Website Machine English Translation of JP 2003-043257) in view of Yoshida (US 2001/0030726), as evidenced by Uchiyama (US 6,638,582).

Regarding claims 8, 17, Matsumoto teaches a laminated film comprising a polarizing film ([0031]) comprising: a first polymer film and a dichroic substance (abstract, SOLUTION) wherein the polarizing film is produced by stretching the laminated film and hence the first polymer film in the TD direction (extension direction in order to make absorption axis intersect perpendicularly to the running direction, [0013]) and shrinking the laminated film and hence the first polymer film in the MD direction (film running direction (MD directions) [0016] which is the machine direction). While Matsumoto does not specify that the laminated film and hence the first polymer film is a long film, Matsumoto teaches that the laminated film and hence the first polymer film travels in the machine direction (running direction, MD direction, [0016]). The length of the laminated film and hence the first polymer film in the machine direction is continuous or an automated production length, which translates into "long". Thus, although Matsumoto is silent regarding the length of the laminated film and hence the first polymer film in the MD direction, since the length of the laminated film and hence the first polymer film in the MD direction (machine direction) is continuous or an automated production length, it can easily be not smaller than five times as long as the stretched length in the TD direction (transverse direction) of the laminated film and hence the polarizing film, for the purpose of providing the desired continuous or automated production length. Matsumoto teaches that the polarizing film has an absorption axis in the TD direction of the polarizing film (intersect perpendicularly to the running direction [0013] which is the machine direction. Matsumoto fails to teach that the laminated film also comprises a retardation film during the production process of the polarizing film.

However, Matsumoto teaches that the formed polarizing film can be laminated to a retardation film (polarization film transferred to the medium … As a medium in the case of transfer, phase difference plate, [0030]). Forming the polarization film together with the retardation film as a laminated film in one single process allows for better production efficiency. Thus the long laminated film having an MD direction and a TD direction, can further comprise a retardation film comprising a second long polymer film having an MD direction and a TD direction, where the laminated film and hence the second polymer film is stretched in the TD direction (extension direction in order to make absorption axis intersect perpendicularly to the running direction, [0013]), for the purpose of providing the desired production efficiency. This means that the retardation film comprising the second long polymer film having an MD direction and a TD direction, can have a slow axis in the MD direction, as evidenced by Uchiyama.

Uchiyama teaches that a retardation film comprising a second long polymer film having an MD direction and a TD direction, can have a slow axis in the MD direction which is perpendicular to the TD direction (slow axis lies parallel to the direction in which the film runs, column 2, lines 1-5, which is the machine direction).

In addition, Matsumoto teaches that the final laminated film comprising the polarizing film and the retardation film is disposed in a liquid crystal display (phase retardation plate, [0030]), but fails to disclose its location as to whether it is disposed outside of the liquid crystal cell of the display.

Yoshida teaches a laminated film comprising a polarizing film (162, [0437], Fig. 94) and a retardation film (168, [0436], Fig. 94) having a slow axis (phase-delay axis,

[0177]) that is orthogonal to the absorption axis of the adjacent polarizing film (first polarizing element, [0177]), wherein the laminated film is disposed outside of a liquid crystal cell of the liquid crystal display (first and second polarizing elements on both sides of a liquid crystal panel of liquid crystal display, [0177]), for the purpose of providing improved viewing angle characteristics for the display ([0178]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have formed the laminated film comprising the polarizing film and retardation film of Matsumoto, in one single process, such that the MD direction of the polarizing film corresponds to the MD direction of the retardation film, in order to obtain the desired production efficiency; and furthermore, to have formed the laminated film such that the retardation film has a slow axis in the MD direction, that is perpendicular to the absorption axis of the polarizing film that is in the TD direction, where the laminated film is then disposed outside of a liquid crystal cell in the liquid crystal display of Matsumoto, in order to obtain the desired improvement in display viewing angle characteristics, as taught by Yoshida, as evidenced by Uchiyama.

Regarding claim 9, Yoshida teaches that the retardation film comprises a uniaxially stretched film ([0437]), for the purpose of providing the desired retardation characteristics for improving the viewing angle as discussed above.

Regarding claim 10, Yoshida teaches that the retardation film comprises an optically uniaxial layer comprising a liquid crystal material ([0183]), for the purpose of providing the desired retardation characteristics for improving the viewing angle as discussed above.

Regarding claim 12, Yoshida teaches that the retardation film is a composite film comprising a birefringent layer provided on a birefringent polymer film (retardation films 61, 63 [0197], polarizing element 21, [0198], Fig. 22), for the purpose of providing the desired combination of retardation characteristics for improving the viewing angle as discussed above.

4. Claims 8, 11, 13-15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto (JPO Website Machine English Translation of JP 2003-043257) in view of Abileah (US 5,907,378), as evidenced by Uchiyama (US 6,638,582).

Regarding claims 8, 17, Matsumoto teaches a laminated film comprising a polarizing film ([0031]) comprising: a first polymer film and a dichroic substance (abstract, SOLUTION) wherein the polarizing film is produced by stretching the laminated film and hence the first polymer film in the TD direction (extension direction in order to make absorption axis intersect perpendicularly to the running direction, [0013]) and shrinking the laminated film and hence the first polymer film in the MD direction (film running direction (MD directions) [0016] which is the machine direction). While Matsumoto does not specify that the laminated film and hence the first polymer film is a long film, Matsumoto teaches that the laminated film and hence the first polymer film travels in the machine direction (running direction, MD direction, [0016]). The length of the laminated film and hence the first polymer film in the machine direction is continuous or an automated production length, which translates into "long". Thus, although Matsumoto is silent regarding the length of the laminated film and hence the first polymer film in the MD direction, since the length of the laminated film and hence the

first polymer film in the MD direction (machine direction) is continuous or an automated production length, it can easily be not smaller than five times as long as the stretched length in the TD direction (transverse direction) of the laminated film and hence the polarizing film, for the purpose of providing the desired continuous or automated production length. Matsumoto teaches that the polarizing film has an absorption axis in the TD direction of the polarizing film (intersect perpendicularly to the running direction [0013] which is the machine direction. Matsumoto fails to teach that the laminated film also comprises a retardation film during the production process of the polarizing film.

However, Matsumoto teaches that the formed polarizing film can be laminated to a retardation film (polarization film transferred to the medium ... As a medium in the case of transfer, phase difference plate, [0030]). Forming the polarization film together with the retardation film as a laminated film in one single process allows for better production efficiency. Thus the long laminated film having an MD direction and a TD direction, can further comprise a retardation film comprising a second long polymer film having an MD direction and a TD direction, where the laminated film and hence the second polymer film is stretched in the TD direction (extension direction in order to make absorption axis intersect perpendicularly to the running direction, [0013]), for the purpose of providing the desired production efficiency. This means that the retardation film comprising the second long polymer film having an MD direction and a TD direction, can have a slow axis in the MD direction, as evidenced by Uchiyama.

Uchiyama teaches that a retardation film comprising a second long polymer film having an MD direction and a TD direction, can have a slow axis in the MD direction

which is perpendicular to the TD direction (slow axis lies parallel to the direction in which the film runs, column 2, lines 1-5, which is the machine direction).

In addition, Matsumoto teaches that the final laminated film comprising the polarizing film and the retardation film is disposed in a liquid crystal display (phase retardation plate, [0030]), but fails to disclose its location as to whether it is disposed outside of the liquid crystal cell of the display.

Abileah teaches that a retardation film is provided in a laminated film comprising the polarizing film, outside of a liquid crystal cell (polarizer 1, retardation film 3, liquid crystal layer 5, column 33, lines 1-10, Fig. 41) of a liquid crystal display (column 32, lines 62-65), for the purpose of obtaining improved contrast ratios for the display (column 33, lines 30-35). Abileah teaches that the retardation film has a slow axis, or axis of retardation that is parallel to the transmission axis of the polarizing film (optical axis of each retardation film is oriented substantially parallel to the adjacent polarizer transmission axis, column 32, lines 39-42) which means that the slow axis of the retardation film is perpendicular to the absorption axis of the polarizing film.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have formed the laminated film comprising the polarizing film and retardation film of Matsumoto, in one single process, such that the MD direction of the polarizing film corresponds to the MD direction of the retardation film, in order to obtain the desired production efficiency; and furthermore, to have formed the laminated film such that the retardation film has a slow axis in the MD direction, that is perpendicular to the absorption axis of the polarizing film that is in the

TD direction, where the laminated film is then disposed outside of a liquid crystal cell in the liquid crystal display of Matsumoto, in order to obtain improved contrast ratios for the display, as taught by Abileah, as evidenced by Uchiyama.

Regarding claim 11, Abileah teaches that the retardation film can comprise a birefringent layer comprising a non-liquid crystal material having a birefringence that is not lower than 0.005 (polyimide, delta n was between 0.02 and 0.03, column 35, lines 1-15), for the purpose of providing the desired retardation characteristics for improving the contrast ratio, as discussed above.

Regarding claims 13-14, Abileah teaches that the birefringent layer can comprise a polyimide (birefringent film, column 18, lines 55-58) which is a polymer that is inherently solid in the film form, for the purpose of providing the desired retardation characteristics for improving the contrast ratio, as discussed above.

Regarding claim 15, Abileah teaches that the birefringent layer can have a relationship nx > ny > nz (nx = 1.4305, ny = 1.4275, nz = 1.4261, column 30, lines 60-65), for the purpose of providing the desired retardation characteristics for improving the contrast ratio, as discussed above.

### ***Response to Arguments***

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample, can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sophie Hon/

Sow-Fun Hon

Examiner, Art Unit 1794